American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

October 3, 2002

RE: FCC ID: PY20225HP
Attention: Tom Tidwell

I have a few comments on this Application.

1 The manual is not complete. Several sections are missing. These sections relate to where the device is used and how it is installed. Please provide these missing sections.

2 Please note, CFR47 Part 2.1033(b) (5) states, “A block diagram showing the frequency of all oscillators in the device. The signal path and frequency shall be indicated at each block. The tuning range(s) and intermediate frequency(ies) shall be indicated at each block.” Is required. Please note that the block diagram provided does not meet this requirement. Please provide a block diagram in accord with 2.1033(b)(5). xxx

3 No Schematic diagrams are provided. Please provide the schematics for this device. xxx

4 You state the device is a DSSS, however, no description of how this is a spread spectrum device has been provided. For example, the plots and other information may apply to a device that is simply an ultra wide FM modulated system. The maximum data through put as listed in the manual is only 19.2 kbps, thus questioning if the device meets the definition of a spread spectrum device. Please note that a DSSS is “A spread spectrum system in which the carrier has been modulated by a high speed spreading code and an information data stream. The high speed code sequence dominates the "modulating function" and is the direct cause of the wide spreading of the transmitted signal.” Please provide a technical description of why this is a DSSS device. xxx

5 Please note that as of Sept 9th, conducted emissions is from 150Khz. Unless you intend to apply under the transition clause 15.37 testing from 150kHz to 30MHz is applicable. Please indicate that you understand the implications of 15.37 as applicable to conducted emissions. xxx

6 You used radiated as the test method for determining power. However, you have not specified the antenna used in the system. While it does not appear to be an external antenna, you must clearly define the antenna used in a part 15 device. Also, your MPE calculations were done using 0dBi antenna gain yet states that a 15dBi+ gain antenna could be used. How is this possible? Please characterize the antenna used in testing this device. Please indicate that the antenna system complies with 15.203 antenna requirements. xxx

7 No indication has been presented that radiated emissions from 30MHz to 1000MHz has been performed. Please provide test data showing this frequency range has been tested. Alternately, please state that this range has been tested but no signals within 20dB were found. xxx

8 Please note that 15.247(c) is both a restricted band requirement in accordance with 15.209 and a band edge requirements whereby “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power” (e.g. band edge compliance). While you have listed the limits of the restricted bands, you have not shown that the device meets the 20dB band edge limitation. Please provide objective evidence that the device meets the band edge requirements in addition to the restricted band requirements. xxx

Dennis Ward
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The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.